

Date: Fri, 11 Jun 93 20:06:48 PDT  
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>  
Errors-To: Info-Hams-Errors@UCSD.Edu  
Reply-To: Info-Hams@UCSD.Edu  
Precedence: Bulk  
Subject: Info-Hams Digest V93 #717  
To: Info-Hams

Info-Hams Digest                      Fri, 11 Jun 93                      Volume 93 : Issue    717

Today's Topics:

        Astron RS-20 B/U Schematic?  
        Digital microwave project  
        FCC Frequency Listing  
        Field Day Power  
        FT-530 mods. Here they are.  
FTP File Compression Question (2 msgs)  
        ham radios in movies  
        Labelling of layers in Ionisphere  
        Repeater  
        Repeaters with those damned beeps  
        Speed of light  
        unsubscribe  
        Velocity of Light  
        WWV on Telephone

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>  
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>  
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available  
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text  
herein consists of personal comments and does not represent the official  
policies or positions of any party. Your mileage may vary. So there.

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Date: 11 Jun 1993 22:51:27 GMT  
From: usenet.coe.montana.edu!netnews.nwnet.net!news.uoregon.edu!  
pcompton.uoregon.edu!user@decwrl.dec.com  
Subject: Astron RS-20 B/U Schematic?  
To: info-hams@ucsd.edu

I recently purchased an Astron RS-20A power supply. After unpacking it, I  
discovered that there is another model that provides automatic battery  
backup switching. I could not return the one I had, and Astron doesn't

sell a modification kit. If there is anyone out there with the Automatic Battery Backup model, I'd really like to get a copy of the schematic and parts list so I can modify the one I have . . . please reply via email to pcompton@hebb.uoregon.edu

Thanks and 73,

Paul E. Compton      WA7NBS  
Brain Electrophysiology Laboratory | Internet: pcompton@hebb.uoregon.edu  
Department of Psychology      | AppleLink: COGNEURO.UOR  
University of Oregon      | Phone: 503.346.6300  
Eugene, OR 97403-1227 U.S.A.      | FAX: 503.346.4911

-----  
Date: Fri, 11 Jun 93 23:38:39 GMT  
From: usc!wupost!csus.edu!netcom.com!netcomsv!orchard.la.locus.com!  
prodnet.la.locus.com!lando.la.locus.com!dana@network.UCSD.EDU  
Subject: Digital microwave project  
To: info-hams@ucsd.edu

In article <C8FqJs.1Hr@zeno.fit.edu> ree88132@zach.fit.edu (Keith Ledig) writes:

>I am about to embark on a project that involves the use of microwaves  
>to transfer digital data. Not being very experienced in microwave  
>technology I have a few questions to ask the microwave gurus. First,  
>a little background: This project will link two computers together  
>through their serial ports at initially 9600 baud but later at speeds  
>of up to 115K baud. The eventual goal is to use SLIP through this  
>connection to get onto the network. The distance will be approx.  
>10 to 15 miles.

>

>1. Where is a good place to get cheap microwave components from?

I don't know offhand, but you can contact Christopher Killian of Carrier Communications at (805) 945-5448. He sells new microwave gear and also sells the odd piece of used gear. Chris mentioned the average price for a used digital microwave link like you describe is \$10k+; you might be able to build a system out of surplus pieces for less. Chris will also be able to tell you some of the suppliers of microwave gear, which you can use to gain more information.

>2. What frequencies can be used for this microwave link? HAM?

For the 10-15 mile range, you would probably use 18 GHz. Lower frequencies would exhibit increased range but allocations are harder to get.

> Are there allocated frequencies for such experimentation and

> do they require a license?

Commercial point-point links are described in the Code of Federal Regulations (CFR) Volume 47, Part 94. The eligibility for these links is described in Part 90. I would suggest you go to a library and research CFR 47 regarding the commercial and experimental licenses.

>3. If I want full duplex, do I need 2 antennas at each end or can  
> one serve as a bidirectional with 2 separate frequencies used?

One antenna should be fine.

>4. Can one antenna be used to transmit AND receive (related to question  
> 3 and 5).

Yes.

>6. Has this been done before with personal/amateur setup?

Commercial users do this all the time.

Good luck!

--

\* Dana H. Myers KK6JQ | Views expressed here are \*  
\* (310) 337-5136 | mine and do not necessarily \*  
\* dana@locus.com DoD #466 | reflect those of my employer  
\*  
\* This Extra supports the abolition of the 13 and 20 WPM tests \*

-----  
Date: Fri, 11 Jun 1993 21:43:35 GMT  
From: dog.ee.lbl.gov!overload.lbl.gov!agate!news.ucdavis.edu!othello.ucdavis.edu!  
ez006683@network.UCSD.EDU  
Subject: FCC Frequency Listing  
To: info-hams@ucsd.edu

Thomas Collins WI3P (collinst@esvx19.es.dupont.com) wrote:  
: Can someone out there in Usenet/Internet land send me email on  
: how to obtain a disk/cdrom copy of the FCC frequency listings.  
: Commercial and Private listings.  
:  
:  
: 73, Tom WI3P collinst@esvax.dnet.dupont.com or collinst@holonet.net  
: \*\*\*\*\* The comments, opinions, belief, sentiment, views & scribblings \*\*\*\*\*  
: \*\*\*\*\* above this signature are mine, and mine alone. They do not \*\*\*\*\*

: \*\*\*\*\* reflect the E.I. DuPont de Nemours Co., Inc., its subsidiaries \*\*\*\*\*  
: \*\*\*\*\* and/or its partners nor its employees or shareholders. \*\*\*\*\*

I would also like to get this information, including long/lat, so I could search it easily. I think this is available from the FCC in tape format but the cost, from what I have heard makes \$800 for the amateur tapes look like a real deal.

Dan

--

```
*-----*
* Daniel D. Todd      Packet: KC6UUD@WA6RDH.#nocal.ca.usa      *
*                      Internet: DDTODD@ucdavis.edu             *
*                      Snail Mail: 1750 Hanover #102            *
*                      Davis CA 95616                          *
*-----*
*      I do not speak for the University of California....    *
*      and it sure as hell doesn't speak for me!!            *
*-----*
```

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Date: Fri, 11 Jun 93 13:22:39 GMT  
From: netcon!bongo!skyld!jangus@locus.ucla.edu  
Subject: Field Day Power  
To: info-hams@ucsd.edu

In article <1993Jun9.141104.25826@ke4zv.uucp> gary@ke4zv.UUCP writes:

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> In article <1v2rnpINNc64@rave.larc.nasa.gov> zawodny@arbd0.larc.nasa.gov (Dr.
> Joseph M Zawodny) writes:
> >
> >Do not go off and buy the most expensive
> >generator in a power class thinking that you get what you pay for. We found
> >that, except for the extremely inexpensive models, there is no correlation
> >between price and performance.
>
> Name names Joseph. Inquiring minds want to know what some of the good
> cheap generators are.
>
```

Kohler: Typically 'the' generator set used in RV's.  
Compact, but expensive to buy/repair.

Onan: Ancient usual pre-WWII vintage

Very rugged, but hard to find parts for.

Coleman: Loud, but reliable. Bigger mufflers available  
Engines are Briggs and Stratton usually.

Homelite: Save your money, buy something else.

Honda: Specially designed quiet models available.  
Expensive, but good designs usually.

Others: Similiar to Coleman types usually.

Reccomendations: Buy a fully enclosed (ie quiet) Honda. Get at least a  
1500 to 2200 watt model. They also have a 12 VDC output  
for charging the car/other batteries. Get 2 or 3 of them  
for a club/group operation. Keep one as the stand-by for  
re-fueling as suggested and run 2-3 stations for each  
generator. The real challenge is in proper maintainance.  
Read the manuals, they really do mean change the oil after  
20-30 hours of operation. Keeping a generator set clean  
and maintained means that it will work when it's supposed  
to.

73 es Gm from Jeff, WA6FWI. QRZ contest, 59 LAX. heh heh heh.....

J. Angus: jangus@skyld.tele.com -- "Als ik Kan", Gustav Stickley  
US Mail: PO Box 4425 Carson, CA 90749-4425 1 (310) 324-6080

-----

Date: 11 Jun 1993 18:34:25 -0700  
From: techbook.com!techbook.com!not-for-mail@uunet.uu.net  
Subject: FT-530 mods. Here they are.  
To: info-hams@ucsd.edu

Gene Wolford (genew@techbook.techbook.com) wrote:

: If anyone figures out how to receive higher freqs, say up to 800-950mhz,  
: (so I can listen to the 900mhz ham band of course), 8-)  
: please let me know!

Thanks to the person who pointed out by email that the pad 13 mod DOES  
allow 900mhz ham band reception. Yaesu does not admit it or like to talk  
about it. Because it's verbotten to listen on cell phone freqs.  
I could not care less about listening to yuppies driveling on their  
beloved cell phones but it might be nice to receive the 900mhz band,  
(when useage picks up).

--

Those who beat their swords into plowshares  
are destined to plow for those who don't.  
genew@techbook.COM

Please direct flames to: genew@ucant.gethere.frmhere

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Date: 11 Jun 93 18:15:41 EST  
From: titan.ksc.nasa.gov!k4dii.ksc.nasa.gov!user@ames.arpa  
Subject: FTP File Compression Question  
To: info-hams@ucsd.edu

In article <01GZ8UVFIIYQ8WWDEB@IRIS.UNCG.EDU>, MOSIER@steffi.uncg.EDU  
(Steve Mosier) wrote:

> When hunting around the internet for FTPable files, I encounter three types of  
> compressed-file extensions: .zip, .arc, and .Z. I have unzip and dearc  
> programs, but nothing to unZ. Can anyone give me an FTP route, and a file  
> name, for a program to uncompress a <filename>.Z file?

steve-

The ".Z" suffix refers to a Unix compression technique. As I understand  
it, you would issue the Unix command, "uncompress filename" or "compress  
filename".

I have about three Macintosh utility programs that have the capability to  
at least uncompress. (The one I prefer is Stuffit Deluxe.) It depends on  
what machine you have. Look for utility programs for your machine, that  
contain the word, "compress", in their title.

Incidentally, the file types you mentioned all require binary ftp transfer  
mode. That was one of the first lessons I learned when I discovered ftp!

73, Fred, K4DII

fred-mckenzie@ksc.nasa.gov

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Date: 11 Jun 1993 22:19:41 GMT  
From: sun-barr!news2me.EBay.Sun.COM!male.EBay.Sun.COM!uranium!  
raymonda@decwrl.dec.com  
Subject: FTP File Compression Question  
To: info-hams@ucsd.edu

In article 01GZ8UVFIIYQ8WWDEB@IRIS.UNCG.EDU, MOSIER@steffi.uncg.EDU (Steve Mosier)

writes:

-> When hunting around the internet for FTPable files, I encounter three types of  
-> compressed-file extensions: .zip, .arc, and .Z. I have unzip and dearc  
-> programs, but nothing to unZ. Can anyone give me an FTP route, and a file  
-> name, for a program to uncompress a <filename>.Z file?  
->  
-> steve - W3GRG  
-> mosier@iris.uncg.edu               dit   dit  
->  
->

You need to use a program called uncompress which is part of the  
standard Unix distribution code.  
If you are running Unix you have it already.

      syntax is:       uncompress filename.Z

There may be a similar version for DOS but I am not aware of it.

      Ray Anderson   WB6TPu  
      Sun Microsystems  
      raymond.anderson@sun.com

-----  
Date: Fri, 11 Jun 1993 21:04:28 GMT  
From: dog.ee.lbl.gov!overload.lbl.gov!agate!news.ucdavis.edu!othello.ucdavis.edu!  
ez006683@network.UCSD.EDU  
Subject: ham radios in movies  
To: info-hams@ucsd.edu

Gary Coffman (gary@ke4zv.uucp) wrote:  
: In article <9306081000.AA21312@swmis> P.Lucas@mail.nerc-swindon.ac.UK writes:  
: >  
: >In some of the 'Dr. WHO' episodes [British SF TV-series from the 1960's and  
: >1970's), Doctor Who repels some alien being using what looks suspiciously  
: >like a Heath dip-oscillator....

: Ooooh, state of the art! Dr. Who's prop guy usually reaches for the  
: kitchen utensils. For those who don't follow Who, this has to be the  
: campiest SF series ever. It's great fun.

Dr. Who campy? Are you kidding! Next thing you'll tell me the original  
Batman series wasw campy :-)

Dan

--

\*-----\*

```

* Daniel D. Todd      Packet: KC6UUD@WA6RDH.#nocal.ca.usa      *
*                    Internet: DDTODD@ucdavis.edu              *
*                    Snail Mail: 1750 Hanover #102              *
*                    Davis CA 95616                            *
*-----*
*      I do not speak for the University of California....    *
*      and it sure as hell doesn't speak for me!!            *
*-----*

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Date: Fri, 11 Jun 1993 23:33:00 GMT
From: usc!howland.reston.ans.net!torn!nott!cunews!freenet.carleton.ca!
Freenet.carleton.ca!ab376@network.UCSD.EDU
Subject: Labelling of layers in Ionosphere
To: info-hams@ucsd.edu

```

In a previous article, fkf1@cornell.EDU (F. Kevin Feeney) says:

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>where are A, B, and C?" Stumped me. Our best collective guess was that
>there might be lower layers with those designations but that they don't
>affect radio so we never talk about them. Can anyone enlighten me? (and the
>class)
>

```

I'm not sure that the answer is that esoteric.  
According to T.W. Bennington in "Short Wave Radio and the Ionospheres" in  
1925 when Sir Edward Appleton discovered the relective properties of one  
of the layers decided to call it the F Layer, in order to leave several  
letters at the disposal of future workers for allocation to others layers  
which they might discover.

Regards

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--
Mike Ligeza - VE3UIL
Ottawa, Ontario
Canada

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Date: Fri, 11 Jun 1993 22:05:00 GMT
From: usc!sol.ctr.columbia.edu!news.kei.com!ub!acsu.buffalo.edu!
ubvmsd.cc.buffalo.edu!v108r7fj@network.UCSD.EDU
Subject: Repeater
To: info-hams@ucsd.edu

```

To anyone:

Two questions. Is there a repeater that will give good coverage  
of the catskill mountain/frost valley area? That is, will I be

able to get in a moderately good signal running 2.5W to a whip fully extended? If you know..please send e-mail ASAP to V108R7FJ@ubvms.cc.buffalo.edu . The last time I will get my e-mail before I go is Sunday, June 13, in the evening.

Also, is there a repeater serving the area around Racket Lake (in the Adirondack mountains)

If so, please send e-mail to the above address before Friday, June 26

(That is, June 25)

Thanks to all

Happy DXing.....

N2UIT

bEn

-----  
Date: 11 Jun 1993 19:01:56 -0400

From: digex.com!digex.net!not-for-mail@uunet.uu.net

Subject: Repeaters with those damned beeps

To: info-hams@ucsd.edu

bwilkins@iat.holonet.net (Bob Wilkins n6fri) writes:

>brian@nothing.ucsd.edu (Brian Kantor) writes:

>: Foo on telemetry beeps; what you really need to do is strip the transmit  
>

>We regenerate the pl signal only when a user is present on the repeater.

>This way the beeps and boops are not heard when one is in CTCSS decode  
>mode.

This sounds like a reasonable compromise. Those who need training wheels can listen to them...along with all the intermod and other repeaters pouring through as they drive through a metropolitan area.

Those who employ good operating technique and those who are obligated to monitor the repeater as control operators need not hear anything but the essentials.

By the way, we send our telemetry out of band. No sense in airing the dirty laundry.

--

bote@access.digex.net (John Boteler)

WARNING: You are subject to pre-emption!

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Date: 11 Jun 1993 16:53:58 -0500  
From: dog.ee.lbl.gov!overload.lbl.gov!agate!howland.reston.ans.net!wupost!  
cs.utexas.edu!gerald@cc.utexas.edu!emx.cc.utexas.edu!not-for-  
mail@network.UCSD.EDU  
Subject: Speed of light  
To: info-hams@ucsd.edu

Two people who had best remain anonymous said:

>>Interestingly, Einstein notwithstanding, the speed of light is slowing down.  
>>Until a few years ago, this was quite evident in the periodic measurements  
>>that were done. Then they started measuring the speed of light using atomic  
>>clocks. Lo and behold, the speed of light is now a constant. They attributed  
>>that to more accurate measurements and better techniques. However, it actually  
>>is due to the fact that the atomic resonances are ALSO slowing down. Even the  
>>"constants" of the universe are subject to the second law of thermodynamics  
>>as is all of creation.

>I could be wrong, but I think the speed of light is now constant because it  
>was decided to fix it as a constant and make any further refinements by  
>adjusting the length of a second.

Is it April 1 already? My calendar must be slow!

Derek Wills (AA5BT, G3NMX)  
Department of Astronomy, University of Texas,  
Austin TX 78712. (512-471-1392)  
oo7@astro.as.utexas.edu

-----  
Date: 11 Jun 93 22:58:35 GMT  
From: news-mail-gateway@ucsd.edu  
Subject: unsubscribe  
To: info-hams@ucsd.edu

unsubscribe

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Date: Fri, 11 Jun 1993 21:21:33 GMT  
From: swrinde!cs.utexas.edu!math.ohio-state.edu!wupost!udel!bogus.sura.net!news-  
feed-1.peachnet.edu!concert!unccsun.uncc.edu!wlhamaty@network.UCSD.EDU  
Subject: Velocity of Light  
To: info-hams@ucsd.edu

In article <1v5ghh\$fad@ux1.cso.uiuc.edu> rtaylor@ux1.cso.uiuc.edu (Roger Taylor) writes:

>Interestingly, Einstein notwithstanding, the speed of light is slowing down.  
>Until a few years ago, this was quite evident in the periodic measurements that  
>were done. Then they started measuring the speed of light using atomic clocks.  
>Lo and behold, the speed of light is now a constant. They attributed that to  
>more accurate measurements and better techniques. However, it actually is due  
>to the fact that the atomic resonances are ALSO slowing down. Even the  
>"constants" of the universe are subject to the second law of thermodynamics  
>as is all of creation.

I could be wrong, but I think the speed of light is now constant because it was decided to fix it as a constant and make any further refinements by adjusting the length of a second.

--

```
[-----]
| Luke Hamaty KQ40Q           "More than gold, I love to complain." |
| Impact Technologies Group - Trurl, from The Cyberiad             |
|                           |                                         |
| 800-438-6017 or 704-549-1100                                     |
|                                                                     |
|-----|
```

Date: 11 Jun 93 14:31:18 PST

From: usc!wupost!udel!news.intercon.com!psinnntp!sfpp.com!longo@network.UCSD.EDU

Subject: WWV on Telephone

To: info-hams@ucsd.edu

In article <9306111557.AA28624@tecnet1.jcte.jcs.mil>, jdelancy@tecnet1.jcte.jcs.mil writes:

> Someone in the recent past asked if time sources like WWV  
> was available on a telephone dial-in basis. Check these  
> out:

>

> WWV - Anchorage AK <Elmendorf AFB> - 907-552-3553

> WWV - Austin TX <Bergstrom AFB> - 512-369-3303

> WWV - Lompoc CA <Vandenberg AFB> - 805-866-3796

>

> Master Clock - Wash DC <Naval Observatory>, 202-653-1800

> Master Clock - Wash DC <Naval Observatory>, 202-653-1920

>

> jd..k1zat

--

Very interesting. Unfortunately, the Vandenberg AFB line seems to be disconnected. Does anyone know of a replacement (hopefully in California)?

-Bob Longo

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=====+=====
Bob Longo (longo@sfpp.com)      | "I am not gonna raise taxes on the
Santa Fe Pacific Pipelines      | middle class to pay for these
Los Angeles, CA                 | programs." - Bill Clinton
```

-----  
Date: 11 Jun 1993 19:10:41 -0400

From: digex.com!digex.net!not-for-mail@uunet.uu.net

To: info-hams@ucsd.edu

References <1993Jun2.150553.22924@ke4zv.uucp>, <luis6e\$cpc@access.digex.net>,  
<1ul3mnINN492@topaz.bds.com>)

Subject : Re: Repeaters with those damned beeps

In article <1ul3mnINN492@topaz.bds.com> ron@topaz.bds.com (Ron Natalie) writes:  
>The beep is to let you know when the timer resets.

Of course, I know why some repeater operators configure courtesy  
beeps.

I have seen several posts propogating the myth that the beep  
tells you when the timer resets. This is only true for \*some\* repeaters.

There are several in just this area which have no correlation  
between beep and timer reset. Most of those reset when  
the repeater COR goes away; the beep is there just for pretty.

--

bote@access.digex.net (John Boteler)  
WARNING: You are subject to pre-emption!

-----  
Date: Sat, 12 Jun 1993 02:36:46 GMT

From: usc!howland.reston.ans.net!darwin.sura.net!mlb.semi.harris.com!

usenet.ufl.edu!zeno.fit.edu!zach.fit.edu!ree88132@network.UCSD.EDU

To: info-hams@ucsd.edu

References <C8FqJs.1Hr@zeno.fit.edu>, <dmcreyno-110693082520@134.5.142.4>,  
<1993Jun11.150745.9462@uhura.neoucom.edu>.edu

Subject : Re: Digital microwave project

In article <1993Jun11.150745.9462@uhura.neoucom.edu> wtm@uhura.neoucom.edu (Bill  
Mayhew) writes:

>And also not exactly for RF either. At microwave frequencies, E and H  
>planes' polarization orientation is easily controlled. We often use  
>use microwave links that have two outbound channels on the same  
>carrier frequency, one carrier with vertical polarization, the other  
>with horizontal polarization.

>--

>Bill Mayhew           NEOUCOM Computer Services Department  
>Rootstown, OH 44272-9995 USA       phone: 216-325-2511  
>wtm@uhura.neoucom.edu     amateur radio 146.58: N8WED/AA

Thanks Bill, this is some great stuff! Now we're getting somewhere.  
How do you get two carriers out of one horn? Do you have 2 diodes,  
one vertical and one horizontal? (ie. for polarization). Good  
point about the polarity. In an experiment we had a receiver and  
a transmitter at 10.5 GHz. When the receiver was twisted 90 degrees  
the signal meter went dead zero, even when face to face one meter  
apart from the TX. Our horns were for educational use only.  
No access to the circuit, just a meter on the receiver. Someone  
also mentioned using a laser. I like that idea (ie. no license  
and it's a do as you please situation). My only concern about  
laser is the hazard of someone looking into it. For a laser to  
go 5 miles or so it needs to be adequate in strength and a good  
wind or storm could knock it down or point it to the ground causing  
a hazard. But I wish not to digress from our microwave topic.

PS. Has anyone done any laser modulation? Time for another post.  
I saw a great article in the "Electronics Now" magazine (when it  
was "Radio Electronics". I am tempted but it's expensive and  
the above hazards exist.

it was electron

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Date: 11 Jun 1993 19:07:16 -0400  
From: digex.com!digex.net!not-for-mail@uunet.uu.net  
To: info-hams@ucsd.edu

References <1993Jun2.150553.22924@ke4zv.uucp>, <1uis6e\$cpc@access.digex.net>,  
<1993Jun2.194952.25935@mnemosyne.cs.du.edu>  
Subject : Re: Repeaters with those damned beeps

jmaynard@nyx.cs.du.edu (Jay Maynard) writes:  
>bote@access.digex.net (John Boteler) writes:  
>>As I said originally, good operating technique obviates the  
>>need for beeps. That's why I operate repeaters without beeps.  
>

>OK, tell me how you'd deal with a conversation with another ham where you're  
>both full quieting and the repeater has a Micor squelch circuit - which  
>removes the noise burst of a conventional squelch closing. How does good  
>operating practice help here?

"Jay, you magnificently ignorant splut!"

Just ask the users of all five of our MICOR repeaters! Seems  
to work just fine for them. :)

>How about repeaters where the beep serves a telemetry function, as well...

We were talking about "courtesy" beeps. If the beep actually  
communicates something useful instead of slapping you on  
the wrist for not being courteous on your own, then that  
is a horse of a different color. This telemetry stuff  
can be taken to extremes without much effort, though.

I like the courtesy pause our repeaters use; so do our users.

--

bote@access.digex.net (John Boteler)  
WARNING: You are subject to pre-emption!

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End of Info-Hams Digest V93 #717

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